

ABSTRACT OF THE DISCLOSURE

A stage 51 on which a semiconductor wafer 53 is placed has a vertically symmetrical construction including a flat plate-shaped container 53 made of metal of good thermal conductivity and thin-film heaters 7, 35 stuck onto the upper surface and under-surface of this container 53. This symmetrical construction prevents flexure due to the thermal expansion of stage 51 and improves thermal uniformity. A cavity 11 for flow of working fluid for cooling purposes is provided within container 53 and a large number of ribs 21 are provided within cavity 11 to improve the mechanical strength of container 53. Working fluid at high pressure flows in from a large number of inlets 17 in the peripheral region of container 53, and is supplied into cavity 11 as high-speed jets through jet apertures 59. Severe turbulence is produced by these jets mutually intermingling and striking against a large number of ribs 21, thereby improving heat exchange efficiency and thermal uniformity.